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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,661

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Brian Good

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EXAMINER

GUIDOTTI, LAURA COLE

ART UNIT

PAPER NUMBER

3723

MAIL DATE

DELIVERY MODE

10/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,661

Applicant(s)

GOOD, BRIAN

Examiner

Laura C. Guidotti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-16 is/are allowed.
- 6) ☒ Claim(s) 1-6,9 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-6, 9, and 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 18 each recites the limitation "said drive shaft" in Lines 6-7. There is insufficient antecedent basis for this limitation in the claim. It is not clear as to whether the applicant intends the motor shaft or is claiming another drive shaft.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 9, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsley et al., US 5,235,718.

Grimsley et al. disclose the claimed invention including an elongated, continuous shaft/cable (22, 24), a brush mounted to a first end of the elongated shaft/cable (10), a single motor constructed for rotationally driving a motor shaft (24) associated therewith at a first rotational speed (20 or 170; Column 4 Lines 49-51, Column 8 Lines 64-67), the

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drive shaft being directly drivingly engaged with a coupling (44), the coupling connected to the elongated shaft/cable for continuously rotating the shaft/cable at a first rotational speed (Column 4 Line 49 to Column 5 Line 3), a pinion gear (is believed to be what is shown as "74" in Figure 4, however described as 78 in Column 5 Lines 58-61, "78" is referred to both a pinion and roller concavity in Column 5 Lines 58-66) drivingly engaged directly with the drive shaft of the motor and interconnected with the plurality of gear members (Figure 4, Figure 11), a plurality of gear members rotationally mounted in juxtaposed, side to side relationship (gear train 72a-c', Figure 4) and cooperating to define a travel path for receiving a length of the shaft/cable and longitudinally driving the shaft/cable in either a forward direction or a rearward direction (travel path is x-x'; Column 5 Lines 34-37, 58-64), and said gear members being constructed for receiving rotation of the pinion gear at the first rotational speed (as shown in Figure 4) and effectively producing a substantially reduced rotation at a second rotation speed (see Figure 4, the evident size of pinion gear 74 in this Figure is smaller in diameter than the gears of the gear train, thereby would be capable of providing a substantially reduced rotation at a second rotation speed), whereby controlled axial movement and rotational movement of the shaft/cable is attained in an efficient and controlled manner (via braking), with the rotational speed of the shaft/cable being substantially greater than the axial/longitudinal movement speed thereof (when braking stops linear speed, Column 2 Lines 41-66). Regarding claim 2, the plurality of gear members comprise five separate and independent gear members (as shown in Figure 4), with three of the gear members being aligned in a first row (either row, Figure 4) and two of the gear members being

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aligned in a second, adjacent row (either row, Figure 4). Regarding claim 3, each of the gear members mounted in the second row are interconnected with the gear members mounted in the first row for rotationally driving at least two of the gear members (as shown in Figure 4, Column 5 Lines 50-53). Regarding claim 4, the pinion gear ("74", Figure 4) is further defined as being mounted in driving engagement with the two gear members mounted in the second row (see Figure 4), whereby the rotational movement of the pinion gear imparts the driving force for rotating all of the gear members (see Figure 4; Column 5 Lines 58-61). Regarding claim 5, each gear member is rotationally mounted on a support shaft (66; Column 5 Lines 48-50) with each of the support shafts being mounted to a support plate (68 or 70) inherently in a juxtaposed, spaced, aligned relationship with each other (Figure 5). Regarding claim 6, each gear member further comprises a concave outer surface portion (as shown in Figure 5) constructed for receiving and controllably advancing the shaft/cable mounted therewith to provide a desired axial movement of the shaft/cable (Column 5 Lines 38-41). Regarding claim 9, there is a handle (14, 52) mounted to a second end of the shaft/cable (Figure 1) capable of enabling an operator to position the brush and rotating the shaft/cable where desired (Column 5 Lines 29-34), the handle further comprising control means for selecting the directional movement of the shaft/cable (30; Column 6 Lines 17-33). Regarding claim 18, the pinion gear (labeled as 74 in Figure 5, incorrectly discussed as 78 in Column 5 Lines 58-64) is at a first rotational speed and effectively produces a substantially reduced rotation at a second rotation speed, the second rotational speed representing the speed of the axial or longitudinal movement of the shaft/cable and the first rotational

speed being further defined as being about twice the second rotational speed (see Figure 4, as pinion gear 74 is about half the size of the other gears, the first rotational speed would be inherently about twice the rotational speed of gears 72a-c').

Regarding claim 19, the rotational speed of the shaft/cable and the longitudinal movement speed of the shaft/cable are controllable by a user (Column 4 Lines 43-62).

Regarding claim 20, the system further includes electronic controls capable of enabling system start-up (such as by control of an electric power line (Column 4 Line 68 to

Column 5 Line 1). Regarding claim 21, the control means is further defined as comprising a pair of air feed lines (32, 34) mounted in the handle (Figures 1, 3, 6), the air feed lines being constructed for controlling the direction of movement of the shaft/cable by opening or closing the feed lines (Column 4 Lines 53-62). While

Grimsley provides evidence in Figure 4 alluding to the fact that said gear members being constructed for receiving rotation of the pinion gear at the first rotational speed and effectively producing a substantially reduced rotation at a second rotation speed (as in Figure 4, the size of pinion gear 74 in this Figure is smaller in diameter than the gears of the gear train, thereby would be capable of providing a substantially reduced rotation at a second rotation speed), Grimsley does not explicitly state that pinion gear 74 is in fact smaller within the written disclosure.

In view of the established evidence provided by Figure 4 of Grimsley showing that pinion gear 74 is smaller than the other gears of the gear train, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify the pinion gear of Grimsley to be smaller than the other gear members so that the gear members

receiving the rotation of the pinion gear at a first rotational speed produce a substantially reduced rotation at the second rotation speed than the other gears, in order to reduce the speed of rotation to achieve an optimal rotation speed desired by a user and by applying a known gear reduction technique to the device of Grimsley would yield predictable results.

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsley et al., US 5,235,718 as applied to claim 1 in view of Ciaccio, US 3,025,547.

Grimsley discloses all elements mentioned above, however does not include a gear reducing assembly.

Ciaccio teaches a cleaning device that has a rotational output of the motor interconnected with a gear reducing assembly (93) capable of reducing the rotational speed of gear members relative to the rotational speed of the shaft/cable and to provide the correct speed of drive (Column 4 Lines 16-18).

It would have been obvious for one of ordinary skill in the art to modify the device of Grimsley and further include a gear reducing assembly, as Ciaccio teaches, so that speed coming from a motor device can be provided with a correct speed.

Allowable Subject Matter

4. Claims 12-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: US 5,235,718 to Grimsley discloses all structural elements previously mentioned above, however in particular does not teach or suggest a spring biased shaft/cable movement control assembly mounted to the receiving portal formed in the

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housing and constructed for receiving the shaft/cable as the shaft/cable axially moves relative to the housing and controllably aligning the shaft/cable for movement relative to the receiving portal in combination with the other claimed elements of claim 12.

Response to Arguments

5. Applicant's arguments filed 30 July 2007 have been fully considered but they are not persuasive.

The Applicant argues that Grimsley incorporates "two separate and independent motors" and that claim 1 "specifically defines a single motor", and consequently "claim 1 is not in any way taught or suggested by the cited reference." The Examiner, however, respectfully disagrees. The system of Claim 1 *comprises* "a single motor". Either the motor 16 or 20 are a single motor, as a "single motor" does not limit the system to having only one motor, just that there is a single motor. In addition, the embodiment of Grimsley shown in Figure 11 includes only one single motor (170).

The Applicant also argues that the patent drawings relied upon by the Examiner are not required to be drawn to scale and such a reliance is incapable of providing the teaching suggested by the Examiner. This argument is persuasive to the Examiner, however the drawings do provide an establishment of evidence in that it would be inherently obvious to have the pinion gear with a smaller diameter than the other gear members and that it would have been obvious for one of ordinary skill in the art to have the pinion gear smaller than the other gear members to reduce rotation at a second rotation speed, in order to reduce the speed of rotation to achieve an optimal rotation speed desired by a user and by applying a known gear reduction technique to the

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device of Grimsley would yield predictable results. See also *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1396 (2007).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura C Guidotti
Laura C Guidotti
Patent Examiner
Art Unit 3723

lcg